

ABSTRACT

ANTENNA DIVERSITY RECEIVER

5 An antenna diversity receiver comprises a zero-IF receiver connected to
two antennas (102a, 102b) via switches (532,534). Simultaneous
measurement of signal qualities from both antennas is possible by routing
signals from the first antenna (102a) via a first mixer (106) and channel filter
(116) and routing signals from the second antenna (102b) via a second mixer
10 (108) and channel filter (118). A diversity controller (536) compares the signal
qualities received from the antennas (102a,102b) during a data preamble to
select a preferred antenna, then adjusts the switches (532,534) to route the
signals from the preferred antenna to both input mixers (106,108). The
amplifier (104a,104b) connected to the deselected antenna may be switched
15 off during data reception, thereby minimising extra power consumption.

Such an antenna diversity receiver enables effective antenna selection
to be performed, even in systems such as Bluetooth where only a very short
preamble is provided for receiver configuration.

20 (Figure 5)